

ON FIVE NEW MAMMALS FROM SIAM.

BY C. BODEN KLOSS, F. Z. S.

1. *Pachyura malayana*, sp. nov.

Type (and only specimen examined). Adult female in alcohol. Obtained at Bang Nara, Patani, Peninsular Siam, July 1916, by Messrs. Williamson and Smith's collectors. Author's number 2603/C. B. K.

Diagnosis. Colour, as viewed with the head of the specimen pointing to the left and the light falling from the front, above bistre (Ridgway), below hair-brown; in some lights distinctly greyish beneath as the hairs have pale glistening tips.

Scattered over the body and hind limbs are a number of long pale hairs like those which occur on the tail; a small patch of adpressed hairs on the sides; tail regularly tapering, dark above and thickly clad with very short hairs, paler below; hindfeet darker and less naked than the forefeet; ears scantily clad with very short hairs.

Measurements. Head and body, 43; tail, 25; hind-foot, s. u., 7.1; ear, 6. Skull (cranium damaged): palatal length, 5.0; upper tooth-row from front of incisors, 5.6; lachrymal breadth of rostrum, 2.4; greatest breadth of rostrum, 4.1; tip of incisors to posterior extremity of mandible, 8.6; mandibular tooth-row, 5.3.

Remarks. This is one of the smallest of mammals and the first example of a pygmy shrew of the genus *Pachyura* that has been met with in the Malay Peninsula.

A female from Amherst, Tenasserim, was described and named by Blyth in 1855 (*Sorex nudipes*, Journ. Asiatic Soc. Bengal, xxiv, p. 34) and quite recently Mr. G. C. Shortridge obtained a specimen at Banlaw, north of Mergui (Wroughton, Journ. Bombay N. H. Soc., xxiii, p. 708; 1915): the present example therefore extends the range some 500 miles down the Peninsula.

I have seen no topotypes of *P. nudipes* and the only obvious justification for separating the Patani specimen rests on the smaller feet of the latter (7.1 against 8.6 mm.); but it is improbable that *nudipes*

and animals occurring 700 miles away from the typical locality are of the same race.

2. *Crocidura aagaardi*, sp. nov.

Type (and only specimen examined). Adult female, skin and skull. Collected at Bang Nara, Patani, Peninsular Siam, by Mr. C. J. Aagaard. Author's number 2604/C.B.K.

Characters. Darker than any of the shrews known from the Malay Peninsula and any of the small islands immediately adjacent and with much less of the brown tinge which characterises all these except *C. gravida* of Langkawi.* Skull relatively broader.

Larger and darker than the mainland form previously described from Perak, *C. malayana* Robinson and Kloss, which is markedly brown in colour. The skull, though smaller, most nearly resembles that of *C. aoris* Robinson, in robustness but is relatively broader, actually so as regards the anterior part of the rostrum.

Colour. As viewed with the head of the specimen pointing to the left and the light falling from in front, above fuscous dusky-drab (Ridgway) apparently very finely frosted in parts, the base of the hair dark neutral grey; below dark hair-brown. (When placed with the head pointing away from the observer and towards the light the colour appears darker and less brown).

Skull. The skull is relatively more robust than *C. aoris* and is actually so as regards the rostrum, though the greater breadth is not so noticeable at the palate expansion as in the upper part of the muzzle anterior to it. (Unfortunately it seems impossible to give a measurement in the region where the difference is greatest which can be referred to a definite point).

Measurements. Head and body, 77; tail, 56; hind-foot, s. u. 14.5; ear, 9. Skull: greatest length, 22.2; front of incisors to posterior extremity, 23.2; basal length, 19.9; palatal length, 9.8; maxillary tooth-row including incisor, 10.5; breadth of rostrum between lachrymal foramina, 5; greatest breadth of palate expansion outside molars, 7.6; mastoid breadth, 10.4; length of mandible including incisors, 15.1.

Remarks. With this specimen I have compared that from Patani

* Kloss, Journ. Fed. Malay States Museums, vii, p. 127 (1917).

recorded as *Soriculus nigrescens* by Bonhote in P. Z. S., 1900, p. 874. Though the latter is not so brown as *malayna* it is browner than the present animal. It is perhaps a little faded, but as it is accompanied by neither skull nor measurements it is difficult to say exactly what it is.

3. *Scotophilus gairdneri* sp. nov.

Type (and only specimen examined). Adult male, skin and skull. Collected at Paknampo, Central Siam, on 6th August 1917, by, Mr. K. G. Gairdner. Author's number 2612/C.B.K.

Characters. About the same size as *S. castaneus* Horsf., of the Malay Peninsula, and *S. wroughtoni* Thomas, of Bombay,* but darker above than either. Rostrum of skull narrower than in *S. castaneus*.

Colour. Above bistre, the head darker; the base of the fur, especially anteriorly, brownish white. Below pale drab, the base of the fur whitish, the latter colour showing most on the neck, anal region and thighs: sides of head and neck like the crown, the drab of the fore-neck extending slightly forward in the median line. The membranes bordering the forearms with white hairs, those bordering the sides with pale drab hairs and the interfemoral membrane with yellowish-drab hairs near the body.

Skull and teeth. Skull like that of *S. castaneus* but with rostrum and palate narrower. Teeth apparently similar.

Measurements :—Head and body, 80; tail, 44; hindfoot, s. u. 9; ear, 15; forearm, 48; tibia, 19.

Skull :—greatest upper median length, 16.6; basi-sinual length, 13.4; palatal length, 6.5; palatal breadth between m_3 (alveoli) 4.9; breadth between tips of upper canines, 4.9; breadth of rostrum between anteorbital foramina, 6.2; upper breadth of rostrum between angular points of ridges, 6.9; front of canine to back of last molar, 6.6; greatest length of mandible, 14.0; front of canine to back of last molar, 7.4.

Remarks. In its pale underparts this bat bears some resemblance to *S. wroughtoni* which has recently been recorded from Central Burma † and which has the undersurface "very pale fawn, almost

*Journ. Bombay Nat. Hist. Soc., XI, p. 275 (1897). Also Wroughton, op. cit., XII, p. 724, pl. unnumbered, fig. 1 (1899).

† Wroughton, op. cit. XXIII, p. 467 (1915).

"white"; but it has the upper pelage much darker. *S. castaneus* is of a brighter brown above and has the undersurface more or less of the same colour as the back though of a paler tint, very different from the whitish-drab of *S. gairdneri*.

4. *Sciurus atrodorsalis thai*, subsp. nov.

Type. Adult female (skin and skull). Collected at Raheng, Central Siam, on 23rd July 1916 by Mr. Mr. K. G. Gairdner. Author's number 2474/C. B. K.

Characters. Differs from typical *atrodorsalis* Gray, from Moulmein, Tenasserim, in having black vibrissae; head like the body, not reddish-yellow: muzzle alone ochraceous and only a ring round the eye and the ears ferruginous.

Differs from *S. a. shanicus* Ryley, from Goteik, North Shan States,* in developing a large black patch on the back with the hairs black throughout in adults (in a subadult specimen annulated); muzzle and eye-ring brighter; underparts very different from the back, feet blackish, grizzled, darker than the body.

Differs from *S. a. zimmeensis* (Robinson and Wroughton) from Chiengmai, North Siam,† in the presence of a large black dorsal patch and the absence of any grizzled median line on the chest and abdomen: also smaller.

Colour. Above a grizzle of black and warm buff, the latter becoming whitish on the limbs which are thus duller; median area of back from behind the shoulders to above the base of the tail black; muzzle pale ochraceous; a ring round the eye and the ears bright tawny, base of ears at back greyish buffy; fore and hind-feet blackish, slightly grizzled with buffy-white. Tail annulated buff and black, the annulations forming distinct broad bands on the distal half except at the tip where the two colours are mingled. Underparts, except the chin and throat which are buffy-grey, burnt sienna to chestnut.

Specimens examined. Three from the type locality.

Measurements. Skull: greatest length, 50.0; condylo-basilar length, 42.2; palatilar length, 20.0; diastema, 11.2; upper molar row

* Journ. Bombay Nat. Hist. Soc. XXII, p. 663.

† Journ. Federated Malay States Mus., VII, p. 91.

(alveoli), 9.6; median nasal length, 15.0; interorbital breadth, 18.2; zygomatic breadth, 29.8.

Remarks. Attention has several times been drawn to the difference between typical *atrodorsalis* with white vibrissae, which seems to be confined to the neighbourhood of Moulmein, and animals from surrounding districts but no distinction has hitherto been made.

5. *Rattus rattus thai*, subsp. nov.

Type :—Adult female (skin and skull) collected at Raheng, Central Siam, on 23rd January 1917 by Mr. K. G. Gairdner. Author's number 2615/C.B.K.

Characters :—Mammae 3-3=12 as in *Rattus rattus sladoni* (Anderson) from the Kakhyen Hills, near Bhamo, and colour apparently similar but skull with larger bullae. Skull as in *R. r. neglectus* of the more southern parts of Siam but colouring rather more ochraceous and with an extra pair of pectoral mammae.

Colour :—Above cinnamon to ochraceous-tawny, streaked by numerous blackish hair-tips; base of fur neutral grey. Below white tinged with yellowish. Hands and feet buffy white, the metapodials slightly dusky mesially. Ears dark. Vibrissae black and white. Tail blackish throughout, conspicuously clad with short hairs; twelve rings to the centimetre at mid-length.

Skull and teeth :—As in *R. r. neglectus* of more southern parts of Siam with bullae of the same size or hardly appreciably smaller.

Specimens examined :—The type and an adult male (No. 2505) from Me Yen, Lakon, North Siam, 1500 ft. collected by Mr Gairdner on 20th November 1915.

Measurements :—Head and body, 167; tail, 170; hindfoot, s. u., 31; ear, 22.

Skull :—greatest length, 40.2 (41.8)*; condylo-basilar length, 35.3 (—); diastema, 11.1 (11.0); upper molar-row (alveoli), 7.0 (7.0); length of palatal foramina, 8.0 (8.0); median nasal length, 14.8 (15.2); breadth of combined nasals, 4.0 (4.2); zygomatic breadth, 19.5 (19.8).

Remarks : This form seems to link up *sladoni* with the rats of

* Measurements in parentheses those of No 2505

Southern Siam, having the mammary formula of the former with the skull of the latter.

I have seen four of the type series of *sladeni* belonging to the Indian Museum: they are preserved in alcohol and now useless as regards colour which, however, was said to have been reddish-brown above and yellowish-white below (Zool. Res. in Yunnan, 1878, p. 305). The skulls are very like the present animal's but the bullae are smaller: three of the specimens are females and the mammae in two are 3-3=12; but in the third, one of the pectoral pairs is absent.

I have also seen three of the type series of *Rattus yunnanensis* (Anderson) from the same district: the mammae of the only female are also 3-3=12 and the skulls so closely agree with those of *sladeni* that they are probably of the same race though they certainly appear to have the smaller external dimensions shown by Anderson.